

4. (Unchanged) The method of claim 1 further comprising running, by a user, a query based on membership in the relation
5. (New) A computer-readable medium having executable instructions to cause a computer to perform a method comprising:
- writing a description between entities in an audio visual sequence, the description containing relations;
  - determining the relations for representation by parameters, each parameter having a numerical value; and
  - obtaining for each parameter at least one of
    - the numerical value,
    - a description of the parameter containing the numerical value, and
    - a description capable of setting the parameter dynamically.
6. (New) The computer-readable medium of claim 5, wherein the method further comprises:
- combining a State DS (description scheme) with an additional field in a GraphType DS.
7. (New) The computer-readable medium of claim 5, wherein combining allows a set of parameters to determine a strength of an edge that is a fuzzy member of a relation defined by edges on a set of vertices.
8. (New) The computer-readable medium of claim 5, wherein the method further comprises:
- performing a query based on membership in one of the relations.
9. (New) A method of weighting a fuzzy relation between description schemes in a content description for a multimedia sequence comprising:

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dynamically deriving a confidence value for the fuzzy relation from a parameter associated with one of the description schemes, the confidence value representing a degree to which the fuzzy relation is a member of a subset of relations among the description schemes.

10. (New) The method of claim 9, wherein the parameter is an attribute value.

11. (New) The method of claim 9, wherein the confidence value is further dynamically derived from a set of parameters associated with the description schemes.

12. (New) The method of claim 9 further comprising:  
modifying the confidence value in response to changes in the parameter as the multimedia sequence progresses.

13. (New) The method of claim 9, wherein the description schemes represent entities in the multimedia sequence, the fuzzy relation represents a relationship between the entities, and the confidence value represents a state of the relationship.

14. (New) The method of claim 13, wherein the state of the relationship is described by a state description scheme that specifies the parameter.

15. (New) The method of claim 9 further comprising:  
associating the description schemes with a set of vertices in a graph and the subset of relations with a set of edges among the set of vertices; and  
calculating the confidence value of the fuzzy relation using a membership function based on graph mapping.

16. (New) The method of claim 15, wherein the membership function is  $m_R(x) = g \circ f(x)$ , where  $R$  is the set of edges over the set of vertices  $A \times B$ ,  $g$  defines a function for the parameter over a parameter space  $PS$ , and  $f$  is a parameterization function  $f: A \times B \rightarrow PS$ ,  $g: PS$ .

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17. (New) The method of claim 15 further comprising:  
writing the graph without the edge representing the fuzzy relation if the confidence value is zero.
18. (New) A computer-readable medium having executable instruction to cause a computer to perform a method comprising:  
dynamically deriving a confidence value for a fuzzy relation between description schemes from a parameter associated with one of the description schemes, the confidence value representing a degree to which the fuzzy relation is a member of a subset of relations among the description schemes in a content description for a multimedia sequence.
19. (New) The computer-readable medium of claim 18, wherein the parameter is an attribute value.
20. (New) The computer-readable medium of claim 18, wherein the confidence value is further dynamically derived from a set of parameters associated with the description schemes.
21. (New) The computer-readable medium of claim 18, wherein the method further comprises:  
modifying the confidence value in response to changes in the parameter as the multimedia sequence progresses.
22. (New) The computer-readable medium of claim 18, wherein the description schemes represent entities in the multimedia sequence, the fuzzy relation represents a relationship between the entities, and the confidence value represents a state of the relationship.
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23. (New) The computer-readable medium of claim 22, wherein the state of the relationship is described by a state description scheme that specifies the parameter.

24. (New) The computer-readable medium of claim 18, wherein the method further comprises:

associating the description schemes with a set of vertices in a graph and the subset of relations with a set of edges among the set of vertices; and

calculating the confidence value of the fuzzy relation using a membership function based on graph mapping.

25. (New) The computer-readable medium of claim 24, wherein the membership function is  $m_R(x) = g \circ f(x)$ , where  $R$  is the set of edges over the set of vertices  $A \times B$ ,  $g$  defines a function for the parameter over a parameter space  $PS$ , and  $f$  is a parameterization function  $f : A \times B \rightarrow PS$ ,  $g : PS$ .

26. (New) The computer-readable medium of claim 24, wherein the method further comprises:

writing the graph without the edge representing the fuzzy relation if the confidence value is zero.